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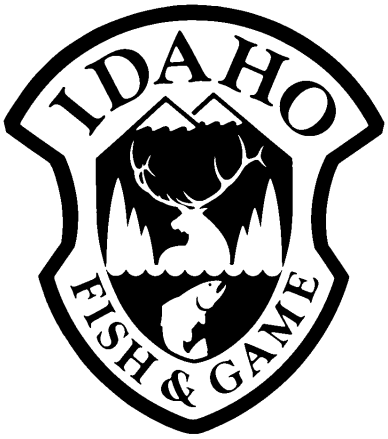

SUMMARY OF ELECTROFISHING DATA FOR THE BOX CANYON SECTION OF HENRYS FORK, MAY 1978

By

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INTRODUCTION

On 16, 23 and 24 May 1978, we electrofished 5.4 km (3.4 mi) of the Henrys Fork of the Snake River from the Buffalo River to Blue Spring Creek. River flows at this time were moderate on the 16th to extremely low on the 23rd and 24th (almost precluding the use of a drift boat for sampling). I had hoped to be able to make a population estimate of the number of wild rainbow in this stretch of the river. However, the low water created maintenance problems for our boat and electrodes and not enough fish could be marked and recaptured to make usable estimates. More time between the last two days of sampling, or another recapture run might have been sufficient for fair population estimates. However, time, personnel and equipment were not available.

TECHNIQUES USED

We drifted the section in a 4.9-m (16-ft) McKenzie River boat with the negative electrode fastened on the bottom of the boat. One person handled the boat, generator and rectifying unit; a second crew member directed the mobile positive electrode, and the third used a long handled dipnet to capture the fish. The rectifying unit provided a pulsed direct current for the first second and then switched automatically to continuous direct current.

At intervals along the drift, the captured fish were anesthetized lightly with MS 222, examined, measured and marked with a small clip of the lower caudal fin. After complete recovery there were released into quiet water areas of the stream. Wild rainbow under 150 mm (6 in) in total length were few and were not counted in the sample. No attempt was made to capture whitefish which were very numerous and are especially susceptible to capture with electrofishing gear.

To cover the river adequately, we fished from the middle of the stream to the left or east bank during one drift, and then from the middle to the right or west bank on a second drift. Two drifts could be made per day.

FINDINGS

We captured 432 wild rainbow in the west half of the river and recaptured 3 previously marked fish. The east half provided us with only 250 wild rainbow and one recapture. Few other species were captured (Table 1).

The mean total length of all wild rainbow captured on the west side of the river was 272 mm (10.7 in). The lengths ranged from 150 mm (5.9 in) to 405 mm (19.5 in). Fish captured on the east side of the river were significantly longer than those from the west side. They averaged 294 mm (11.6 in) with a range of 150 mm (5.9 in) to 560 mm (22.1 in) (Table 2).

ACKNOWLEDGEMENTS

I am grateful to several people for their assistance in this short term sampling project. Russ Thurow allowed us to use his electrofishing gear and Mel Reingold helped transport it and provided us with a drift boat. Will Reid, Greg Tourtlotte, Bruce Penske, Steve Mate and Dave Cadwallader all served as crew members during the sample runs.

APPENDIX

Table 1. Summary of fish species and numbers collected by electrofishing 5.4 km of the Henrys Fork in Box Canyon, May 1978

Sample Date	Wild Rainbow Captured	Wild Rainbow Recaptured	Other Species Captured Hatchery rb	Brook	Coho	Kokanee
			West half of river			
5/16	110	0	0	1	1	0
5/23	178	0	0	2	0	3
5/24	144	3	2	0	0	1
Total	432	1	2	3	1	4
			East half of river			
5/16	74	0	0	0	0	0
5/23	85	1	0	0	0	0
5/24	100	0	0	5	0	6
Total	259	1	0	0	0	6

Table 2. Mean total length of wild rainbow collected by electrofishing 5.4 km of the Henrys Fork in Box Canyon, May 1978.

Sample Date	Mean total length: West half of river MM	West half of river IN	East half of river MM	East half of river IN
5/16	270	10.6	291	11.5
5/23	273	10.7	286	11.3
5/24	274	10.8	301	11.9
Total	272	10.7	294	11.6

WILD RAINBOW

LENGTH FREQ Henrys Fork SEC Box Canyon PER ___ DATE(S) 5/16/78

by Electro fishing WILD RAINBOW

Length (mm)	West ½ of stream	East ½ of stream	Length (mm)	West ½ of stream	East ½ of stream
			355	II	I
			360	I	II
			365		I
			370		I
			375		II
			380	I	I
			385		
150			390		
155			395		
160			400		
165			405	II	
170			410		
175	I		415	I	I
180			420		I
185			425		I
190	II	I	430		
195	III	I	435		
200	I		440		
205			445		
210	I		450		
215	I		455		
220	IIII	IIII	460		
225	IIII	IIII	465		
230	III	I	470		
235	IIII		475		
240	IIII	I	480		
245	IIII	II	485		
250	III	IIII	490		
255	IIII	II	495		
260	IIII	III	500		
265	IIII II	IIII	505		
270	IIII IIII	IIII	510		
275	IIII	II	515		
280	IIII II	II	520		
285	IIII	II	525		
290	IIII	III	530		
295	IIII	IIII	535		
300			540		
305	II	I	545		
310	III	III	550		
315	II	IIII			
320	III				
325	I				
330		II			
335	I	II			
340	II	III			
345		I			
350	II				

West Side N=110
$\Sigma x = 29,720$
$\Sigma x^2 = 8,259,300$
$\bar{x} = 270.18$ (10.6")
$s = 45.89$

Eastside N=74
$\Sigma x = 21,510$
$\Sigma x^2 = 6,488,200$
$\bar{x} = 291.49$ (11.5")
$s = 52.45$

WILD RAINBOW

LENGTH FREQ Henrys Fork-WRB SEC Box Canyon PER — DATE(S) 5/23/78

Length (mm)	WRB Westside	WRB Eastside
150	4	2
155		
160		
165		
170		
175		
180	5	
185	2	
190	2	
195		1
200		1
205	1	1
210		2
215	2	
220	3	
225	7	3
230	3	1
235	4	5
240	7	1
245	8	1
250	11	5
255	6	
260	13	2
265	8	3
270	14	7
275	6	7
280	12	5
285	5	2
290	4	5
295	1	2
300	4	1
305	4	
310	1	5
315	4	
320	3	
325	2	3
330	1	2
335	2	2
340	1	1
345	7	1
350	2	
355		1
360	1	2
365	3	
370	3	2
375	1	
380		1
385		
390		
395		
400	3	
405		
410		1
415		1
420		1
425		
430	2	
435		1
440	1	
445		1
450		
455		
460		
465		
470		
475		
480		
485		
490		
495		
500		
505		
510		
515		
520		
525		
530		
535		
540		
545		
550		

Westside: N = 177
$\Sigma x = 48,244$
$\Sigma x^2 = 13,621,936$
$\bar{x} = 272.56$ (10.7")
$S = 52.35$

Eastside: N = 85
$\Sigma x = 24,320$
$\Sigma x^2 = 7,231,900$
$\bar{x} = 286.12$ (11.3")
$S = 57.06$

WILD RAINBOW

LENGTH FREQ Henrys Fork SEC Box Canyon PER — DATE(S) 5/24/78

Length (mm)	West ½ of Stream	East half	Length (mm)	West ½ of Stream	East half
			355	I	
			360	III	II
			365	I	
			370	I	I
			375	II	
			380	I	IIII
			385		II
150	II	I	390		II
155	I		395		I
160	I		400	I	II
165		I	405		
170	I	I	410	I	I
175	II		415	I	I
180	III		420		
185	I		425		III
190			430	I	I
195	II		435		I
200	II	I	440	I	
205	III	I	445	I	
210		II	450		
215	III	I	455		
220	II	I	460		
225	III	III	465		
230	IIII	II	470	I	
235	III		475		
240	IIII II	IIII	480		
245	IIII I	II	485		
250	IIII II	I	490		
255	IIII	IIII	495	I	
260	IIII III I	IIII	500		
265	IIII I	III	505		
270	IIII III	IIII	510		
275	IIII	IIII I	515		
280	III	III	520		
285	IIII I	III	525		
290	III	III	530		
295	IIII		535		
300	II	I	540		
305	III	II	545		
310	II	I	550		
315	II				
320	I	IIII	560		I
325	II	I			
330	II				
335	IIII	IIII			
340	II	II			
345	II				
350		III			

Westside: N=144
$\Sigma x = 39,480$
$\Sigma x^2 = 11,392,850$
$\bar{x} = 274.17$ (10.8")
$s = 63.07$

Eastside: N= 100
$\Sigma x = 30,130$
$\Sigma x^2 = 9,571,100$
$\bar{x} = 301.30$ (11.9")
$s = 70.56$